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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,479	08/22/2003	Jin-hyung Kim	1293.1809	8719

21171 7590 07/19/2007		EXAMINER
STAAS & HALSEY LLP		KASSA, HILINA S
SUITE 700		
1201 NEW YORK AVENUE, N.W.	ART UNIT	PAPER NUMBER
WASHINGTON, DC 20005	2625	

MAIL DATE	DELIVERY MODE
07/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/645,479	KIM, JIN-HYUNG
	Examiner	Art Unit	
	Hilina S. Kassa	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>22 August 2003</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-16</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-16</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>22 August 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

       1.☒ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>10/01/04, 07/14/05</u>.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2.   Claims 11 and 14 are rejected under 35 U.S.C. 102(a) as being anticiapted by

Kimimori (Japanese Publication Number 2002-057741, see IDS).

(1) regarding claims 11 and 14:

Kimimori discloses method, comprising:

determining, during a printing operation, whether data to be printed on a wireless

network printer is not received for more than a predetermined period of time (paragraph

21, lines 3-5); and

generating and reporting print error information regarding a communication

between a wireless network printer server and a computer when data is not received for

more than the predetermined period of time (paragraph 21, lines 3-5; paragraph 26,

lines 1-7).

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Inoguchi et al. (US Patent Number 7,107,058 B2) and in view of Kimimori (Japanese

Publication Number 2002-057741, see IDS).

(1) regarding claim 1:

Inoguchi et al. teach determining whether a link state or a link quality of a

wireless communication is good by analyzing the received wireless communication

information (column 2, lines 43-47); and (d) generating print error information regarding

the communication between the wireless printer server and a host when the link state or

the link quality of the wireless communication is bad (column 2, lines 48-54); and (e)

reporting the print error information to the user (column 5, lines 35-43; note that the

message gets outputted via the display panel).

Inoguchi et al. disclose all of the subject matter as described as above except for

teaching (a) determining whether data to be printed are not received by the wireless

printer server for more than a predetermined period during the wireless printing

operation, (b) requesting and receiving wireless communication information on the

wireless printer server upon determining that the data to be printed are not received by the wireless printer server for more than the predetermined period.

As shown in figure 3, Kimimori teaches a method of informing a user about a print error of a printer that performs a wireless printing operation using a wireless printer server (paragraph 24, lines 1-4; note that 302 is the wireless terminal device that displays and notifies user of an error), comprising:

(a) determining whether data to be printed are not received by the wireless printer server for more than a predetermined period during the wireless printing operation (paragraph 21, lines 3-5; note that the microprocessor reads the data of a server or buffer according to a predetermined time schedule);

(b) requesting and receiving wireless communication information on the wireless printer server upon determining that the data to be printed are not received by the wireless printer server for more than the predetermined period (paragraph 22, lines 1-3);

Inoguchi et al. and Kimimori are combinable because they are from the same field of endeavor.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art (a) determining whether data to be printed are not received by the wireless printer server for more than a predetermined period during the wireless printing operation, (b) requesting and receiving wireless communication information on the wireless printer server upon determining that the data to be printed are not received by the wireless printer server for more than the predetermined period.

The suggestion/motivation for doing so would have been because it is efficient and time saving to diagnose the communication between the print server and the printer.

Therefore, it would have been obvious to combine Inoguchi et al. with Kimimori to obtain the invention as specified in claim 1.

(2) regarding claim 2:

Inoguchi et al. further teaches, the method of claim 1, wherein (c) comprises: (c1) determining whether the link state of the wireless communication is in an on state after (b) (column 2, lines 61-63); and

(c2) determining whether the link quality is in good condition to smoothly perform the wireless communication when the link state of the wireless communication is in the on state (column 2, lines 43-47), wherein if the link state of the wireless communication is in an off state in (c1) or the link quality is in a bad condition to smoothly perform the wireless communication in (c2) (column 2, lines 63-66), (d) is performed (column 3, lines 3-9).

(3) regarding claim 3:

Inoguchi et al. further teaches, the method of claim 1, wherein the link state information and the link quality information on the wireless communication are generated as the print error information in (d) (column 5, lines 1-3).

(4) regarding claim 4:

Inoguchi et al. further teaches, the method of claim 3, wherein date and time when the print error appeared, channel information, or identification address and Internet address of the host, which transfers the data to be printed, are further generated as the print error information in (d) (column 6, lines 50-62; note that when there is a failure, the channel information and service center information gets printed).

(5) regarding claim 5:

Inoguchi et al. further teaches, the method of claim 1, wherein the print error information is displayed on a display screen of the printer or is printed in (e) (column 5, lines 14-19; note that the error message gets presented in the display panel).

(6) regarding claim 6:

Inoguchi et al. disclose an apparatus for informing a user about a print error of a printer that performs a wireless printing operation using a wireless printer server

(column 3, lines 44-53; column 5, lines 14-17; note that user gets informed of the error

via a display panel), the apparatus comprising:

a communication information request unit to request the wireless communication

information on the wireless printer server in response to the detection result and to

output a requested result (column 4, lines 50-55);

a communication information analysis unit to analyze a link state or a link quality

of the wireless communication by receiving the wireless communication information

from the wireless printer server and to output an analysis result (column 5, lines 1-13);

an error information generation unit to generate print error information based on

the analysis result and to output the print error information (column 5, lines 1-3); and

an error information informing unit to report the print error information to the user

(column 5, lines 35-43; note that the message gets outputted via the display panel).

Inoguchi et al. disclose all of the subject matter as described as above except for

teaching a data receiving detection unit to detect whether data to be printed are not

received by the wireless printer server for more than a predetermined period during the

wireless printing operation and to output a detection result.

However, Kimimori teach a data receiving detection unit to detect whether data to

be printed are not received by the wireless printer server for more than a predetermined

period during the wireless printing operation and to output a detection result (paragraph

21, lines 3-5; paragraph 30, lines 1-3; note that the microprocessor reads the data of a server or buffer according to a predetermined time schedule).

Inoguchi et al. and Kimimori are combinable because they are from the same field of endeavor.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have a data receiving detection unit that detects data to printed has been received for more than a predetermined period.

The suggestion/motivation for doing so would have been to save processing time.

Therefore, it would have been obvious to combine Inoguchi et al. with Kimimori to obtain the invention as specified in claim 6.

(7) regarding claim 7:

Inoguchi et al. further disclose the apparatus of claim 6, wherein the communication information analysis unit comprises:

a link on detection unit to detect whether the link state of the wireless communication is in an on state and to output a detection result (column 2, lines 61-63); and

a link quality measurement unit to measure the link quality with a sensitivity of

communication between the wireless server printer and a host in response to the

detection result and to output a measurement result (column 6, lines 54-62),

wherein the error information generation unit generates the print error information

based on the detection result or the measurement result (column 7, lines 12-17).

(8) regarding claim 8:

Inoguchi et al. further disclose, the apparatus of claim 6, wherein the error

information generation unit generates link state information and the link quality

information on the wireless communication as the print error information (column 5,

lines 1-3).

(9) regarding claim 9:

Inoguchi et al. further disclose, the apparatus of claim 8, wherein the error

information generation unit further generates a print date and time when the print error

appeared, channel information, or identification address and Internet address of the

host, which transfers the data to be printed (column 6, lines 50-62; note that when there

is a failure, the channel information and service center information gets printed).

(10) regarding claim 10:

Inoguchi et al. further disclose, the apparatus of claim 6, wherein the error
information informing unit displays the print error information on a display screen of the
printer or prints the print error information (column 5, lines 14-19; note that the error
message gets presented in the display panel).

3.   Claims 12-13 and 15-16 are rejected under 35 U.S.C. 103(a) as being

unpatentable over (Japanese Publication Number 2002-057741, see IDS) as applied to

claims 11 and 14 above, and further in view of Inoguchi et al. (US Patent Number

7,107,058 B2).

(1) regarding claims 12 and 15:

Kimimori discloses all of the subject matter as described as above in claims 11

and 14 except for teaching determining whether a link quality and a link state of the

communication are both good, wherein the print error information is not generated and

transmitted when the link quality and the link state are both good.

However, Inoguchi et al. teach determining whether a link quality and a link state

of the communication are both good, wherein the print error information is not generated

and transmitted when the link quality and the link state are both good (column 2, lines

43-47; note that the condition of each channels is printed out, there is no print error generation).

Kimimori and Inoguchi et al. are combinable because they are from the same field of endeavor.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have to determine whether a link quality and a link state of the communication are both good.

The suggestion/motivation for doing so would have been reliable and efficient to save processing time.

Therefore, it would have been obvious to combine Kimimori with Inoguchi et al. to obtain the invention as specified in claims 12 and 15.

(2) regarding claims 13 and 16:

Kimimori discloses all of the subject matter as described as above in claims 11 and 14 except for teaching wherein the link quality denotes a sensitivity of the communication, which can be measured using a signal-to-noise (S/N) ratio or an error rate.

However, Inoguchi et al. teach wherein the link quality denotes a sensitivity of the communication, which can be measured using a signal-to-noise (S/N) ratio or an error rate (column 5, lines 1-3).

Kimimori and Inoguchi et al. are combinable because they are from the same field of endeavor.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to denote a sensitivity of the communication that can be measured using an error rate.

The suggestion/motivation for doing so would have been for accuracy in order to generate an error free communication link.

Therefore, it would have been obvious to combine Kimimori with Inoguchi et al. to obtain the invention as specified in claims 13 and 16.

Conclusion

4.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fritz et al. (US Publication Number 2002/0051184 A1) discloses a method and an arrangement in a data communication system to achieve a wireless communication between a processing unit and a printer suing a safe transmission and an increased transmission range compared to the infrared transmission.

5.   Any inquiry concerning this communication or earlier communication from the

examiner should be directed to Hilina Kassa whose telephone number is (571) 270-

1676.

Any response to this action should be mailed to:

Commissioner of Patent and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal

Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the Technology Center 2600 Customer Service Office

whose telephone number is (703) 306-0377.

Hilina Kassa

June 25, 2007
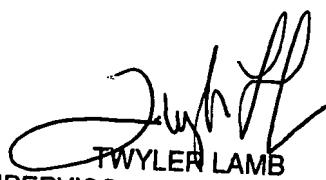
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